INDICATORS OF EARLY CHILDHOOD HEALTH AND WELL-BEING IN BRITISH COLUMBIA

BASELINE REPORT

105-03654/

EXECUTIVE SUMMARY

In September 2000, all provinces (excluding Quebec), the territories and the federal government agreed to regular reporting on a common set of agreed to indicators of well-being for children aged 0 to 6.

By issuing these reports, British Columbia hopes to:

- Raise awareness of how children in this province are doing in terms of health and well-being;
- Publicly demonstrate its commitment to promoting the health and well-being of children 0 to 6 in this province; and
- Demonstrate commitment to reporting under the Federal/Provincial/Territorial Agreement on Early Childhood Development.

The data in this report are drawn from various sources, including British Columbia's Vital Statistics Agency, Statistics Canada and the National Longitudinal Survey of Children and Youth.

Additional data are provided on the Status Indian population in British Columbia (Status Indian as defined by the *Indian Act).* Although there is interest in providing information on the health and well-being of Aboriginal children, relatively consistent and reliable data exist primarily for Status Indian population, which make up approximately 65% of all British Columbia's Aboriginal population. Therefore, this report uses Status Indian data as a close proxy for indicators of the Aboriginal population. However, the interpretative value of these data is somewhat limited in that it is not reflective of the broader Aboriginal population in this province.

Highlights:

Overall, the indicators demonstrate that the health and well-being of British Columbia children is consistent with children across Canada. In some areas, British Columbia scored higher than the national average.

- In 1998/1999, 93.1% of British Columbia children were breastfed, which is higher than the national average of 79.9%;
- Fewer British Columbia mothers smoke during pregnancy (12.9%), compared to the national average (34%); and
- In 1999, the infant mortality rate for British Columbia children was 3.8 per 1,000 live births, which is lower than the national average of 5.3 per 1,000 live births.

The health and well-being of children in our province when compared over the years 1998 and 1999 showed consistency or slight changes in the indicators:

- There was an increase in injury hospitalization rate for motor vehicle traffic accidents, falls, self-inflicted injuries and assaults;
- 6.5% per 1,000 births were pre-term in 1999, compared to 6.4% per 1,000 births in 1998;
- In 1999, 4.8% of births were low birthweight, slightly lower than 5.1% in 1998

The indicators for Status Indian children and their families suggest that these children have comparatively poorer health and well-being than other children in the province.

- Between 1991 and 1998 the average pre-term birth rate for Status Indian children was 88.7 per 1,000 births, this is 50% higher than for British Columbia children which was 60.7 per 1,000 live births
- The infant mortality rate for Status Indian children declined between 1991 and 1998 (14.5 per 1,000 births to 4.6 per 1,000 births).

The information contained in this report provides a framework for future monitoring and reporting on the health and well-being of children in British Columbia. This framework is an evolving document; indicators may be revisited and refined in future reports.

Please note that the data and comparisons in this report have not been tested for statistical significance.

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Introduction

In September 2000, First Ministers released a Communiqué affirming their commitment to the well-being of children through a shared vision of early childhood development (ECD) as an investment in the future of Canada. As part of the public reporting commitments outlined in the communiqué, First Ministers committed to making regular public reports on outcome indicators of child well-being using an agreed upon set of common indicators. These indicators are based on the following ECD objectives:

- To promote early childhood development so that, to their fullest potential, children will be physically and emotionally healthy, safe and secure, ready to learn and socially engaged and responsible.

- To help children reach their full potential and to help families support their children within strong communities.

This report will form the baseline against which future progress will be measured.

Why is Child Well-being Important?

There is growing research-based evidence that supports the fact that ensuring children's health and well-being, beginning from preconception to age six, has long lasting positive effects on health, social and emotional well-being, and achievements throughout life.

"The idea that early childhood experiences have long-term implications is not new. What is new, however, is the emerging understanding of how early childhood experiences change the biology of the developing child in ways that can influence health, well-being and competence decades later". (Hertzman, 2002)[1]

"Good nutrition, safe water, immunization, responsive care-giving, play-based learning, protection and the support of mothers and other caregivers, lead to good early child development. Violence, illness, malnutrition, limited play-based learning and other poor socialisation opportunities on the other hand, during the early years, profoundly affect learning ability, behaviour, and physical and mental health throughout the life course". (Mustard & Picherack, 2002)[2]

Ensuring children's optimal physical, emotional and social health pays off through increased school success; increase future productivity; and reduced cost of health and public services.[3] In short, investing in children's early years results in life-long benefits to children, families and society as a whole.

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[1] Hertzman, Clyde, "Perspectives on Social Inclusion: Leave No Child Behind! Social Exclusion and Child Development", Laidlaw Foundation Working Paper Series, page 9, May 2002.
[2] Mustard, Fraser & Picherack, Frances, "Early Child Development in British Columbia: Enabling Communities", page 4, May 2002.

[3] M.E. Young. (1995) Investing in Young Children: World Bank Discussion Paper. Washington, DC: The World Bank.

Factors, such as the child's family, extended family and community play a significant role in determining the outcomes for children. Government plays a role in providing funding to early childhood development programs which build family and community capacity.

Investments in ECD are long-term commitments, with outcomes that will be realized over time. Data collection is required over time to monitor meaningful change. This report forms the baseline from which changes in children's health and well-being can be assessed over time.

Indicators Framework

The provinces have agreed to a common framework for measuring child well-being, which outlines five domains of child well-being:

- Physical health and motor development;
- Emotional health;
- Social knowledge and competence;
- Cognitive learning; and
- Language and communication.

Data Sources

All jurisdictions (excepting Quebec[4]) have agreed to report on 11 indictors related specifically to child outcomes. As well, a broader set of 12 indicators related to child and environmental (family and community) outcomes have been identified. Several jurisdictions have indicated an intention to report, in part or in whole, on the additional indicators. British Columbia is reporting on all the indicators (including the 12 broader indicators) and four additional indicators for the health and well-being of the Status Indian population.

Data for this report have been drawn from several different sources, including British Columbia's Vital Statistics Agency, Statistics Canada and the National Longitudinal Survey of Children and Youth (NLSCY). The NLSCY is a joint Human Resource Development Canada and Statistics Canada study to determine the factors that influence children's health over time. Since 1994, the survey began collection of information on an initial 23,000 children and families and is conducting follow-up surveys every two years. The study considers a variety of children's health factors including for example: literacy, leisure, parenting, and childcare. The survey does not include children living on reserve or in institutions.

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[4] The Government of Quebec has stated that, while sharing the same concerns on early childhood development, Quebec does not adhere to the federal-provincial-territorial early childhood development initiative because sections of it infringe on its constitutional jurisdiction on social matters. Quebec intends to preserve its sole responsibility for developing, planning, managing and delivering early childhood development programs.

British Columbia has included indicators on the health and well-being of Status Indian children in order to monitor and understand the unique challenges facing British Columbia's Aboriginal child population. Status Indian data are a close proxy for indicators of the Aboriginal population-based health outcomes in British Columbia.

The baseline indicators are divided into the broad categories of: Health, Early Development, Safety and Security, Family-Related Indicators and Community-Related Indicators.

Data sources are listed, along with relevant exclusions and caveats, with each measure.

Please note that the data and comparisons in this report have not been tested for statistical significance.

Future Reports

The indicators in this report establish the measures upon which future reports will be based and allow comparison over time.

In addition, BC has initiated an Early Childhood Development Action Plan which includes implementation of the Early Development Instrument (EDI) through schools across the province. The EDI will provide data about children's readiness to learn at kindergarten. These data will form part of future reports on children's health and well-being; indicating neighbourhood variations in children's development across the province. The Province will use data obtained from the EDI measurement to inform decision-making around funding allocation and developing or enhancing services and programs to support Early Childhood Development in identified communities.

Other Sources of Statistical Information

Currently, there are a number of sources that provide statistics on the health and well-being children in British Columbia. A list of some of these resources is provided as an Appendix to this document.

CHILD-RELATED INDICATORS

1. Physical Health

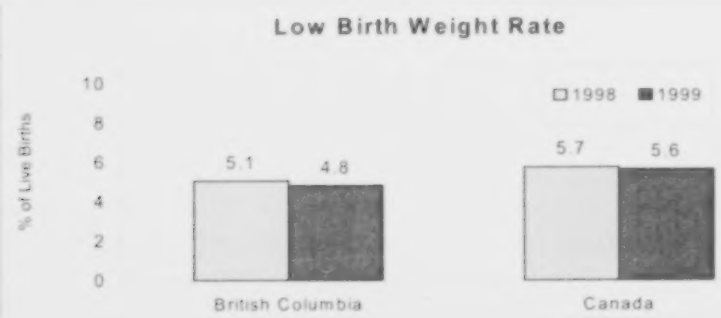
A. Birth weight

Analysis:

- In 1999, the proportion of low birth weights for BC children was 4.8%, reflecting an improvement from 5.1% in 1998. This is less than the Canadian average of 5.6%.
- In 1998 and 1999 the proportion of BC children born with high birth weight remained static at 13.7%

Rationale:

- Low birth weight is a key determinant of infant survival, health and development. Low birth weight has been linked to infant mortality, physical disability and long term health problems, including heart disease and diabetes.
- High birth weight may increase an infants disposition to certain chronic conditions in adulthood, including obesity, high blood pressure, diabetes and breast cancer.



Definition:

(i) Low Birth Weight is the percentage of live births with a weight less than 2,500 grams.
(ii) High Birth Weight is the percentage of live births with a weight of more than 4,000 grams.

Caveats:

Births with unknown birth weight and births to non-Canadian residents are excluded from both the Low and High Birthweight measures.

Source:

Canadian Vital Statistics – Birth Database (Statistics Canada).

ii) Low Birth Weight for Status Indians and the British Columbia General Population

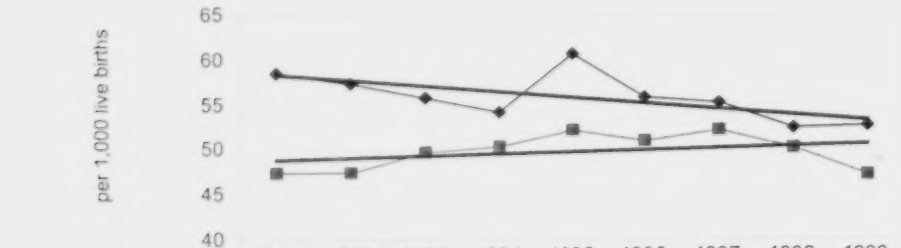
Analysis:

- Over the eight-year period, the Status Indian low birth weight (LBW) rate was 56.1 per 1,000 live births, which was slightly higher than the LBW rate of 50 per 1,000 live births, among the British Columbia general population.
- It is important to note that while the LBW rate of the British Columbia general population has increased over this period, the Status Indian LBW rate shows a decrease.

Rationale:

- Birth weight is a good indicator of the health status of newborns and their subsequent health and well being. Evidence indicates that a birth weight under 2,500 grams poses a risk to the newborn.

Low Birth Weight Rates for BC General Population and Status Indians



year	1991	1992	1993	1994	1995	1996	1997	1998	1999
Status Indians	58.5	57.3	55.8	54.1	60.5	55.8	55.1	52.3	52.4
Others	47.5	47.4	49.7	50.3	52	50.9	52.1	50	47.1
ratio	1.2	1.2	1.1	1.1	1.2	1.1	1.1	1.0	1.1

Definition of Measure:

Low Birth Weight is the percentage of Status Indian live births with a weight less than 2,500 grams. Status Indian is defined as an Aboriginal person who is registered under the *Indian Act* of Canada.

Caveats:

Births with unknown birth weight and births to non-Canadian residents are excluded from both the birth weight measures.

Source:

BC Vital Statistics Agency, Analysis of Status Indians in British Columbia 1991-1999.

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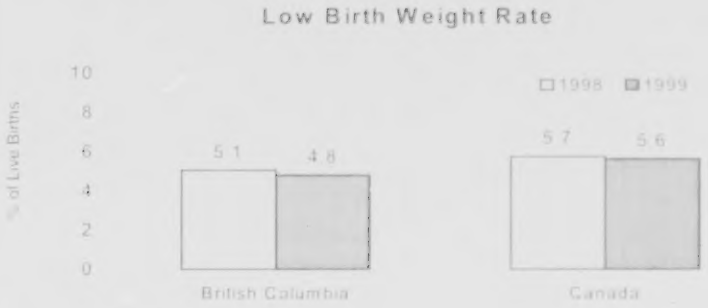
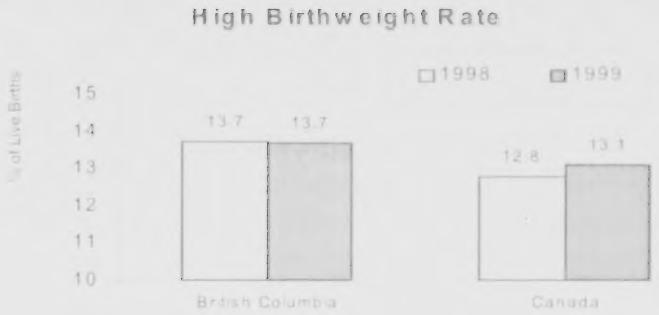
- In 1998 and 1999 the proportion of BC children born with high birth weight remained static at 13.7%.

Rationale:

- Low birth weight is a key determinant of infant survival, health and development. Low birth weight has been linked to infant mortality, physical disability and long term health problems, including heart disease and diabetes.
- High birth weight may increase an infants disposition to certain chronic conditions in adulthood, including obesity, high blood pressure, diabetes and breast cancer.





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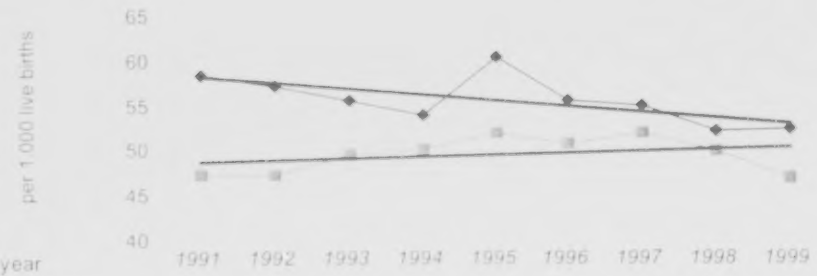
- It is important to note that while the LBW rate of the British Columbia general population has increased over this period, the Status Indian LBW rate shows a decrease.

Rationale:

- Birth weight is a good indicator of the health status of newborns and their subsequent health and well being. Evidence indicates that a birth weight under 2,500 grams poses a risk to the newborn.

Low Birth Weight Rates for BC General Population and Status Indians



year	1991	1992	1993	1994	1995	1996	1997	1998	1999
Status Indians	58.5	57.3	55.8	54.1	60.5	55.8	55.1	52.3	52.4
Others	47.5	47.4	49.7	50.3	52	50.9	52.1	50	47.1
ratio	1.2	1.2	1.1	1.1	1.2	1.1	1.1	1.0	1.1

Definition of Measure:

Low Birth Weight is the percentage of Status Indian live births with a weight less than 2,500 grams. Status Indian is defined as an Aboriginal person who is registered under the *Indian Act* of Canada.

Caveats:

Births with unknown birth weight and births to non-Canadian residents are excluded from both the birth weight measures.

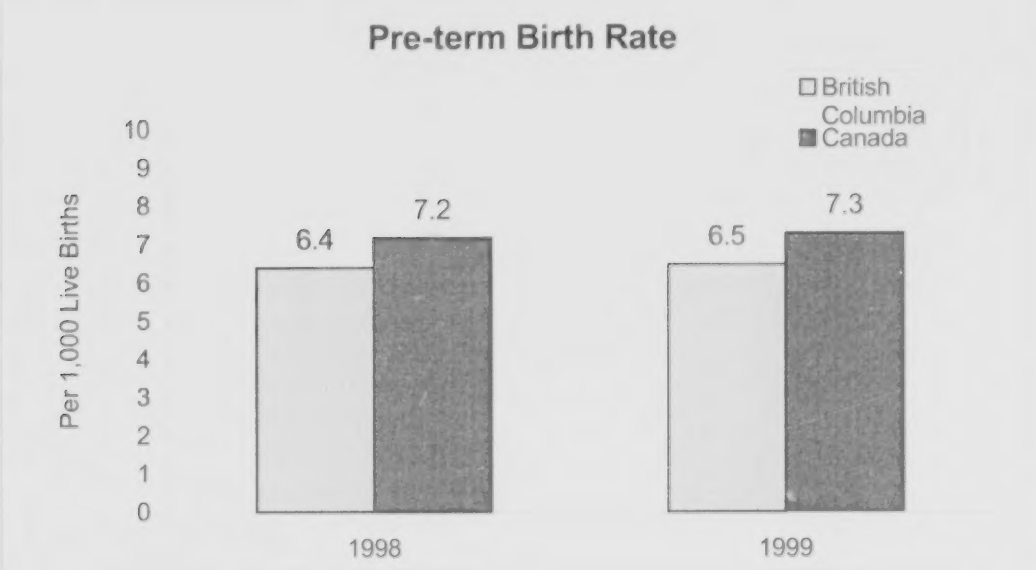
Source:

BC Vital Statistics Agency, Analysis of Status Indians in British Columbia 1991-1999.

B. Pre-Term Birth Rate

i) Pre-term Birth Rate for British Columbia and Canada

Analysis:
• In 1999, 6.5 per 1,000 live births of BC births were pre-term, an increase from 6.4 per 1,000 live births in 1998. • BC has fewer pre-term births when compared to the national average of 7.3 per 1,000 live births for Canada.
Rationale:
• Pre-term birth is associated with higher rates of perinatal illness, neonatal death and long term complications, including disabilities.



Definition of Measure:
The percentage of live births with a gestational age at birth of less than 37 completed weeks (less than 259 days).
Caveats:
Births with unknown gestational age and gestational age less than 20 weeks, as well as births to non-Canadian residents are excluded.
Source:
Canadian Vital Statistics – Birth Database (Statistics Canada).

ii) Pre-term Birth Rates for British Columbia General Population and Status Indians

Analysis:

- Over the eight-year period, the average Status Indian pre-term birth rate was 88.7 per 1,000 live births, which was higher than the rate of 60.7 per 1,000 live births for the general British Columbia population. This difference, however, has become less apparent in recent years.

Rationale:

- Pre-term birth babies are associated with higher rate of perinatal illness, neonatal death and long term complications, including disabilities.

Pre-term Birth Rates for BC General Population and Status Indians

year	1991	1992	1993	1994	1995	1996	1997	1998	1999
Status Indians	87.6	86.1	89.6	85	93.6	94.4	87.2	85.9	88.8
Rest of BC	58.4	59.1	58.2	58.9	63.1	62.9	63.3	61.9	60.8
ratio	1.5	1.5	1.5	1.4	1.5	1.5	1.4	1.4	1.4

Definition of Measure:

The percentage of Status Indian live births with a gestational age at birth of less than 37 completed weeks (less than 259 days).

Caveats:

Births with unknown gestational age and gestational age less than 20 weeks, as well as births to non-Canadian residents are excluded.

Source:

BC Vital Statistics Agency, 1991-1999.

C. Immunization Rates for Meningococcal Disease, Measles and Haemophilus Influenza b (HIb) Disease in Children

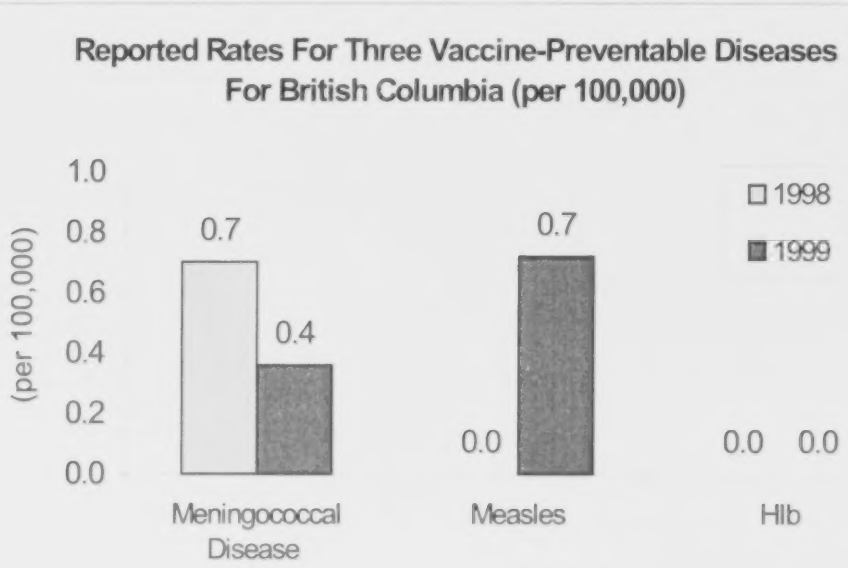
Analysis:

- In 1999, the rate of new cases of Invasive Meningococcal disease in BC children was 0.4 per 100,000 reflecting a decrease from 0.7 per 100,000 in 1998[1]
- In 1999 the rate of new cases of Measles was 0.7 per 100,000 for BC children.
- There were no cases of HIb reported in BC for 1998 and 1999.

Rationale:

- Proper and timely immunization effectively protects children from a host of debilitating and sometimes deadly childhood diseases.

[1] Note: this decrease is not due to vaccination, as BC does not provide this vaccine.



Definition of Measure:

(i) Meningococcal Disease is the rate of new cases reported by year in children 5 years of age and younger.

(ii) Measles is the rate of new cases reported by year in children 5 years of age and younger (note: since 1998, all Measles cases are imported or import-related).

(iii) Haemophilus Influenza b (HIb) Disease in children is the rate of new cases reported by year in children 4 years of age or younger.

Caveats:

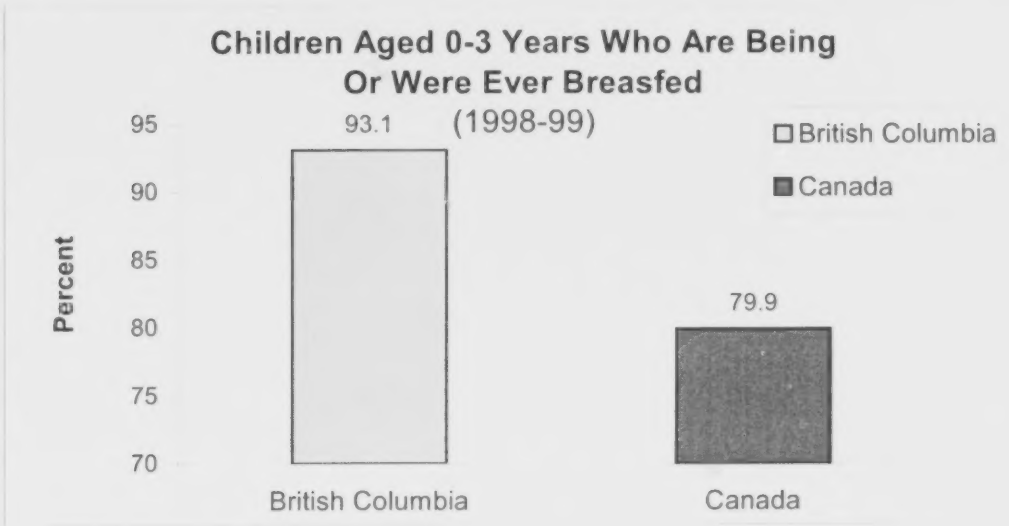
N/A

Source:

Division of Immunization and Respiratory Diseases, Health Canada.

D. Prevalence of Breastfeeding

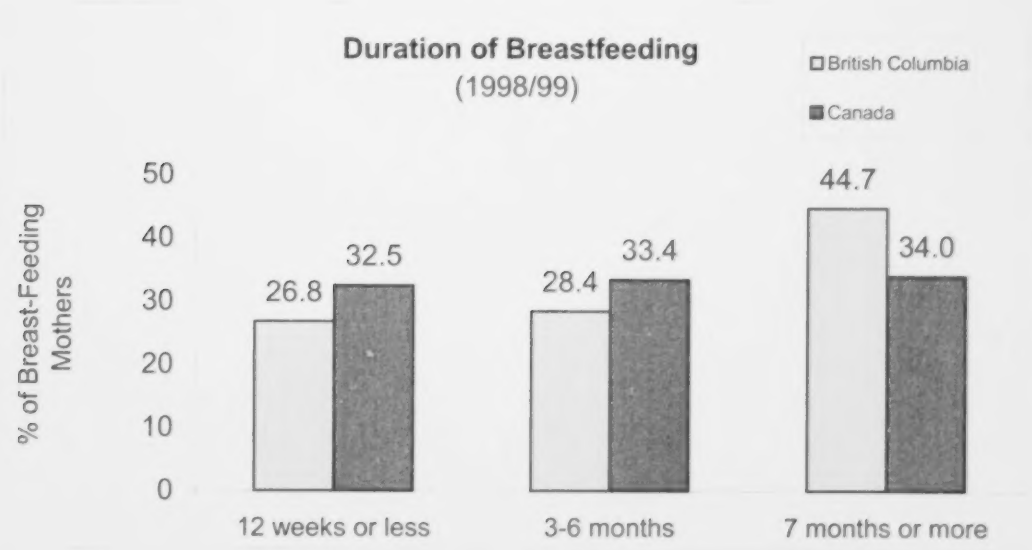
Analysis:
• According to the National Longitudinal Survey of Children and Youth, Cycle 3 (1998/99), 93.1% of BC children aged 0-3 were breastfed, which in substantially higher than the national average of 79.9%. However, it should be noted that most children are not breastfeed for 3 years.
Rationale:
• Prevalence of breastfeeding is a measure, which is linked to prevention of health problems in children. Breastfeeding provides the essential nutrients for healthy growth and aids in resistance to infections and prevention of allergies. Breastfeeding also facilitates bonding between mother and child.



Definition of Measure:
The proportion of children aged 0-3 years who are currently being or have ever been breastfed.
Caveats:
Children aged 4-5 years, children living in the Territories, children living on reserve and children living in institution have been excluded.
Source:
National Longitudinal Survey of Children and Youth, Master File (Statistics Canada), Cycle 3 (1998/99), Parent Questionnaire.

E. Duration of Breastfeeding

Analysis:
• BC children are generally being breastfed longer then the national average (44.7% of BC children were breastfed for 7 months or more, compared to the national average of 34.0%).
Rationale:
• Research indicates that children should be breastfed a minimum of 6 months or more for optimal health of the baby. However, mothers may discontinue breastfeeding their children for a number of reasons including lack of knowledge, difficulty breastfeeding, and unsupportive environments for breastfeeding.

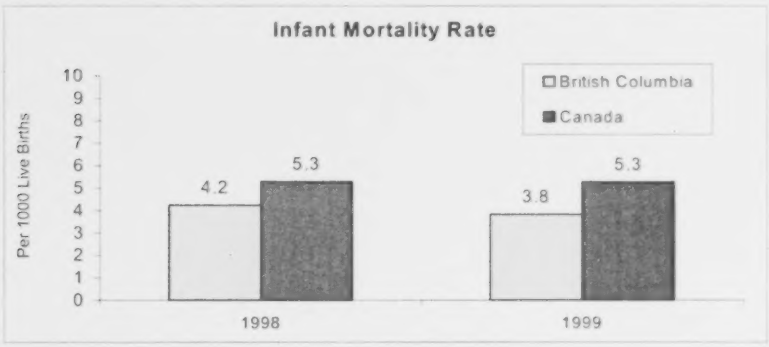


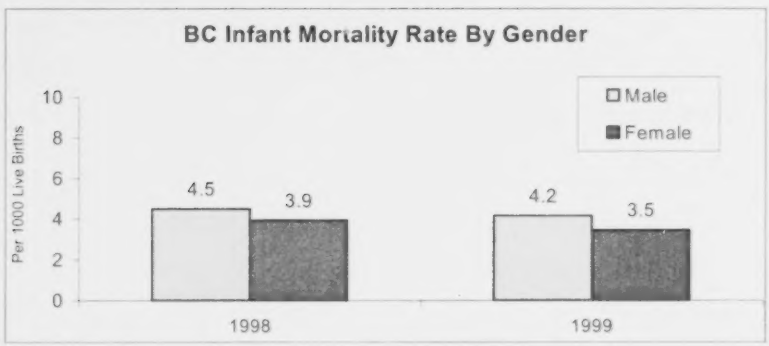
Definition of Measure:
The length of time children aged 0-3 years were breastfed.
Caveats:
Children aged 4-5 years living in the Territories, on reserves, and in institutions were not included in the survey.
Source:
National Longitudinal Survey of Children and Youth, Master File (Statistics Canada), Cycle 3 (1998/99), Parent Questionnaire.

F. Infant and Child Mortality Rates

i) Infant Mortality Rate

Analysis:
• In 1999 the infant mortality rate for BC children was 3.8 per 1,000 live births, which is lower than the national average of 5.3 per 1,000 live births. • Both male and female infant mortality rates for BC have decreased, which indicates a general improvement in the health of infants in BC.
Rationale:
• Infant mortality is a fundamental measure of child health as well as the well-being of a society. It reflects not only the level of mortality, but also the health status and health care of a population, the effectiveness of preventive care and the attention paid to maternal and child health.



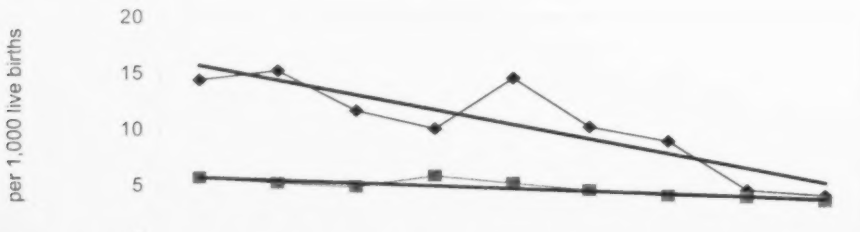


Definition of Measure:
The number of infants who die in the first year of life per 1,000 live births.
Caveats:
Births to non-Canadian residents are excluded.
Source:
Canadian Vital Statistics – Mortality, Summary List of Causes (Statistics Canada).

ii) Infant Mortality Rates for Status Indians and British Columbia General Population

Analysis:
• Overall, there has been a decrease in infant mortality rates among the Status Indian population in the eight–year period, from 14.5 per 1,000 live births in 1991 to 4.6 per 1,000 live births in 1998, which is slightly higher than that of the infant mortality for general British Columbia rate of 4.0 per 1,000 live births in 1998. • On average, over the eight-year period the infant mortality rate for Status Indians was twice the rate for the general British Columbia population.
Rationale:
• Infant mortality is a fundamental measure of child health as well as the well being of a society. It reflects not only the level of mortality, but also the health status and health care of a population, the effectiveness of preventive care and the attention paid to maternal and child health.

Infant Mortality Rates for BC General Population and Status Indians

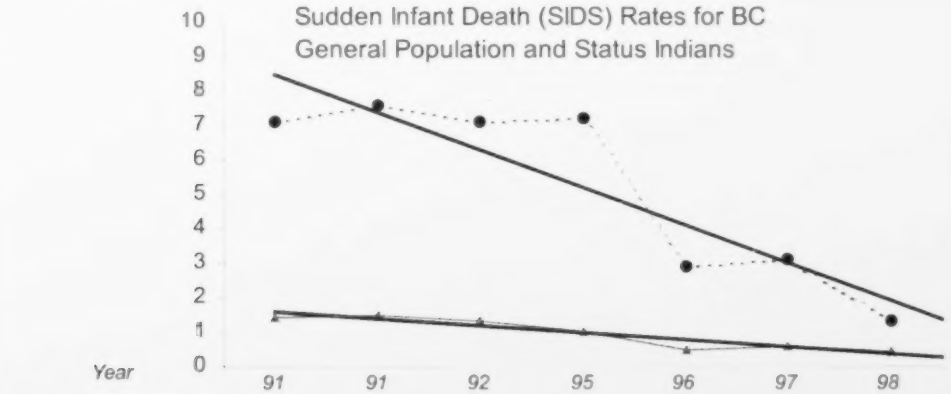


year	1991	1992	1993	1994	1995	1996	1997	1998	1999
Status Indians	14.5	15.4	11.7	10.1	14.7	10.3	9	4.6	4.2
Rest of BC	5.8	5.3	5	5.9	5.3	4.6	4.2	4	3.7
ratio	2.5	2.9	2.3	1.7	2.8	2.2	2.1	1.2	1.1

Definition of Measure:
The number of Status Indian infants who die in the first year of life per 1000 live births.
Caveats:
N/A
Source:
BC Vital Statistics Agency, Analysis of Status Indians In British Columbia 1991-1999.

iii) Sudden Infant Death Rates for Status Indians and British Columbia General Population

Analysis:
• Sudden Infant Death (SIDS) was the leading cause of infant mortality in the Status Indian population (40% of all Status Indian infant deaths were SIDS related). • Since 1995 the rate of SIDS among Status Indians has dropped from seven times the British Columbia general population rate to just over three times. However, the smaller Status Indian population means that this trend is more volatile for Status Indians than for the general population of British Columbia.
Rationale:
• Although the underlying causes of SIDS remain uncertain, research has demonstrated that infants who sleep on their backs have the lowest risk of SIDS. Other factors potentially associated with an elevated risk of SIDS include smoking during pregnancy and exposure to second-hand smoking after birth.



Year	91	91	92	95	96	97	98
Status Indians	7.1	7.6	7.1	7.2	2.9	3.1	1.3
Rest of BC	1.4	1.5	1.3	1	0.5	0.6	0.4
Ratio	5.1	5.1	5.5	7.2	5.8	5.2	3.3

Source: Analysis of Status Indians in British Columbia 1991-1998, BC Vital Statistics Agency

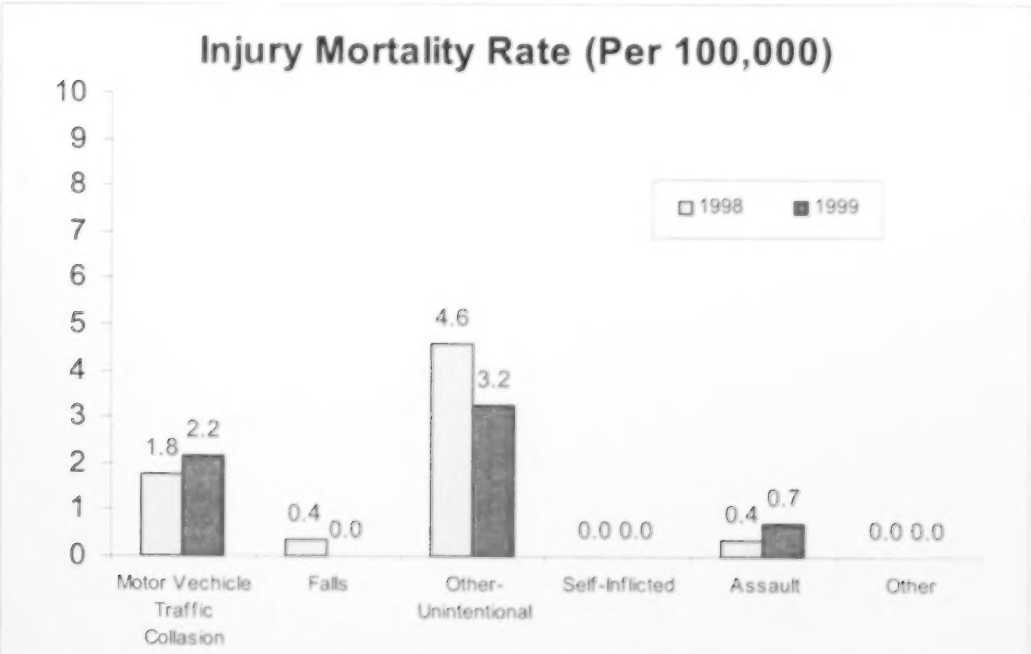
Definition of Measure:
When a Status Indian infant less than one year old dies suddenly, and the cause of death is unknown.
Caveats:
N/A
Source:
BC Vital Statistics Agency, Analysis of Status Indians In British Columbia 1991-1998.

2. *Safety and Security*

A. Injury Mortality Rate (0-5 Age Group)

Analysis:
• In 1999 there has been a decrease in "other - unintentional deaths"[1] (from 4.6 per 100,000 in 1998 to 3.2 per 100,000 in 1999) and falls (from 0.4 per 100,000 in 1998 to no cases reported in 1999). • Between 1998 and 1999 the injury mortality rate due to motor vehicle collisions and assault increased slightly.
Rationale:
• The injury mortality rate identifies the major environmental factors causing child death. Many of these hazards are almost completely preventable. This analysis identifies risks to children's health, which can be mitigated through a broad range of public health and accident prevention strategies, public education, safer product development and use, community and road design and prevention and treatment.

[1] "Other – Unintentional" does not include deaths from motor vehicle collisions, falls, self-inflicted and assault.



Definition of Measure:
The proportion of children aged 0-5 years who die as a result of an injury.
Caveats:
Non-Canadian residents are excluded.
Source:
Canadian Vital Statistics – Mortality Database (Statistics Canada) 1998 and 1999.

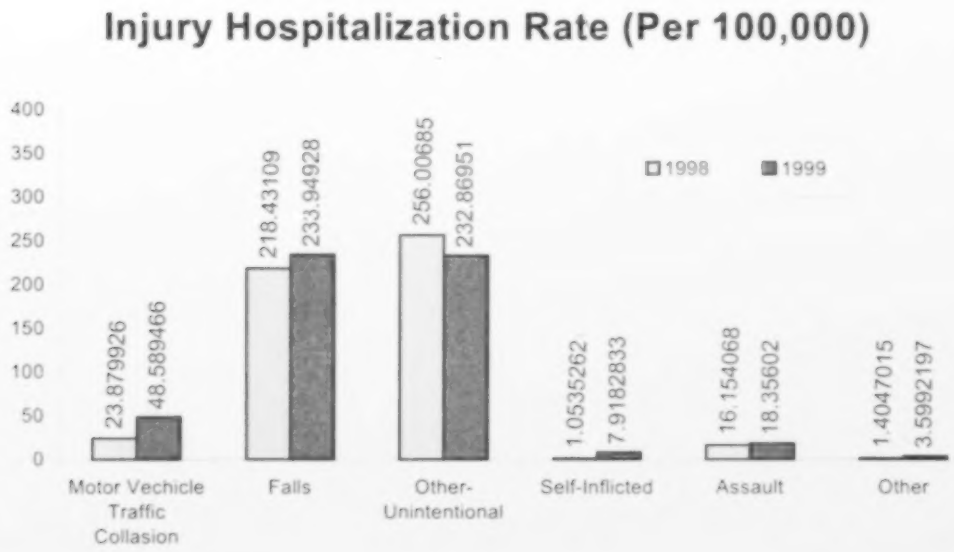
B. Injury Hospitalization Rate

Analysis:

- 1999 shows an increase in the injury hospitalization rate for motor vehicle traffic collisions (MVTC), falls, self-inflicted injuries and assaults.
- The increase in the injury hospitalization rate for motor vehicle collisions and assaults is consistent with the increase in the injury mortality rate for motor vehicle collisions and assaults (refer to page 15), which suggests that there has been a significant increase in the number of these occurrences.

Rationale:

- This is a measure of the risk to children's health and of risk-taking behaviour. It is also a measure of the adequacy of a broad range of public health and accident prevention strategies, including public education, product development and use, community and road design, and prevention and treatment resources.
- Unintentional injuries and falls are the leading causes of death and injury for children and youth and both are almost entirely preventable.



Definition of Measure(s):

The proportion of children aged 0-5 years who are hospitalized for treatment of injuries.

Caveats:

N/A

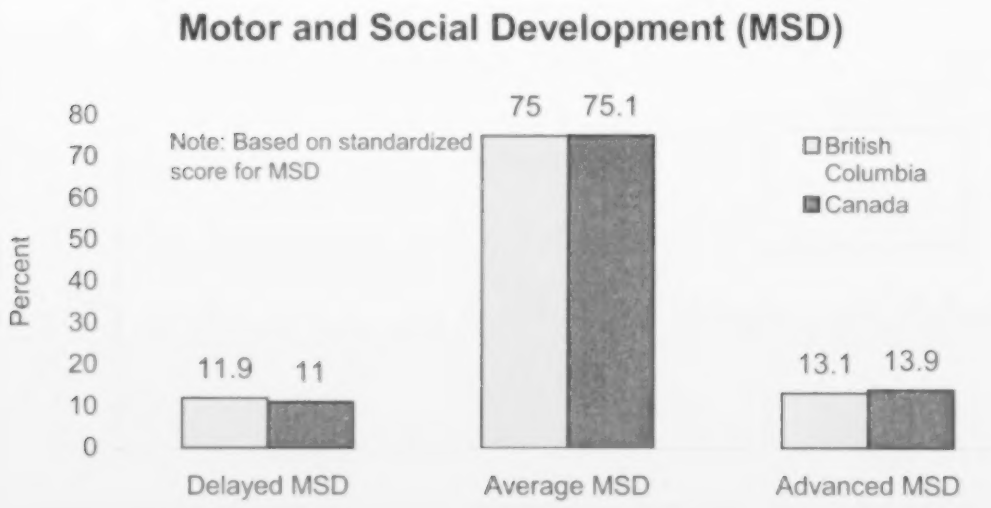
Source:

Canadian Institute for Health Information (CIHI) 1998/99 - hospital records.

3. *Early Development*

A. Physical Health and Motor Development

Analysis:
• British Columbia is marginally behind Canadian children in motor and social development (MSD) skills. • The majority of BC children (75%) have average MSD, with 13.1% having advanced MSD, and only 11.9 % indicating a delayed MSD.
Rationale:
• Optimal physical and social development throughout the early childhood years is a clear indicator of the health of a child and a predictor of future health of the child. Healthy physical and social development is essential since deficits or delays may be reduced but not reversed as a child grows.



Definition of Measure:
Motor and Social Development - the proportion of children aged 0-3 years who have delayed, average and advanced levels of motor and social development.
Caveats:
A standardized score is used for this indicator, in which the average score for the population is set at 100 with a standard deviation of 15. This takes into account the child's age and allows for comparisons across age groups.
Source:
Canadian Vital Statistics – Mortality, Summary List of Causes (Statistics Canada).

B. Emotional Health and Social Knowledge and Competence

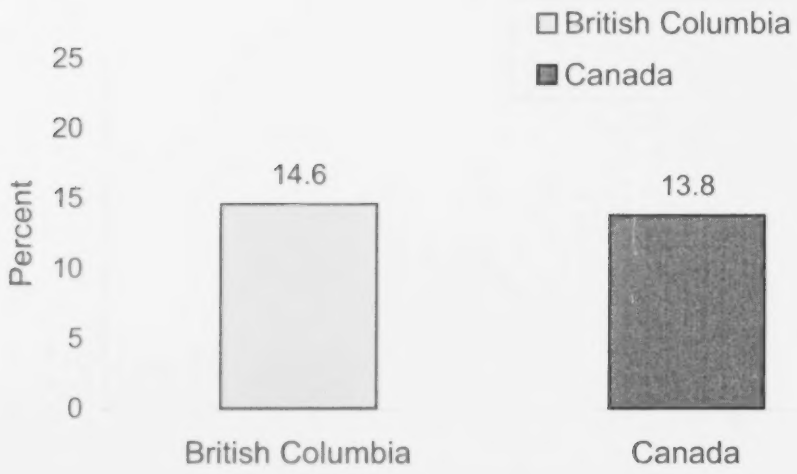
Analysis:

- In 1998/99, 14.6% of BC children had high emotional problems or anxiety, which is slightly higher than the national average of 13.8%.

Rationale:

- Both internal (biological) and external environmental influences impact emotional health. Emotional health is an important component of healthy development because it has both immediate and long term influences on children's outlook on life, social peer interactions and ability to cope.

Children Aged 2-5 Years Who Exhibit High Levels of Emotional and/or Anxiety Problems
(1998/99)



Definition of Measure(s):

(i) Emotional Problem – Anxiety Score is the proportion of children aged 2-5 years who exhibit high levels of emotional and/or anxiety problems.
(ii) Hyperactivity – Inattention Score is the proportion of children aged 2-5 years who exhibit high levels of hyperactivity and/or inattention.
(iii) Physical Aggression Score is the proportion of children aged 2-5 years who exhibit high levels of physical aggression, opposition and/or conduct disorder.
(iv) Prosocial Behaviour Score is the proportion of children aged 2-5 years who exhibit low levels of prosocial behaviour

Caveats:

Children aged 0-1 years, children living in the Territories, children living on reserve and children living in institutions are excluded from all four indicators. As well, children whose actual age at the time of interview was one year have been removed from the Prosocial Behaviour indicator.

Source:

National Longitudinal Survey of Children and Youth, Master File (Statistics Canada), Cycle 3 (1998/99), Parent Questionnaire.

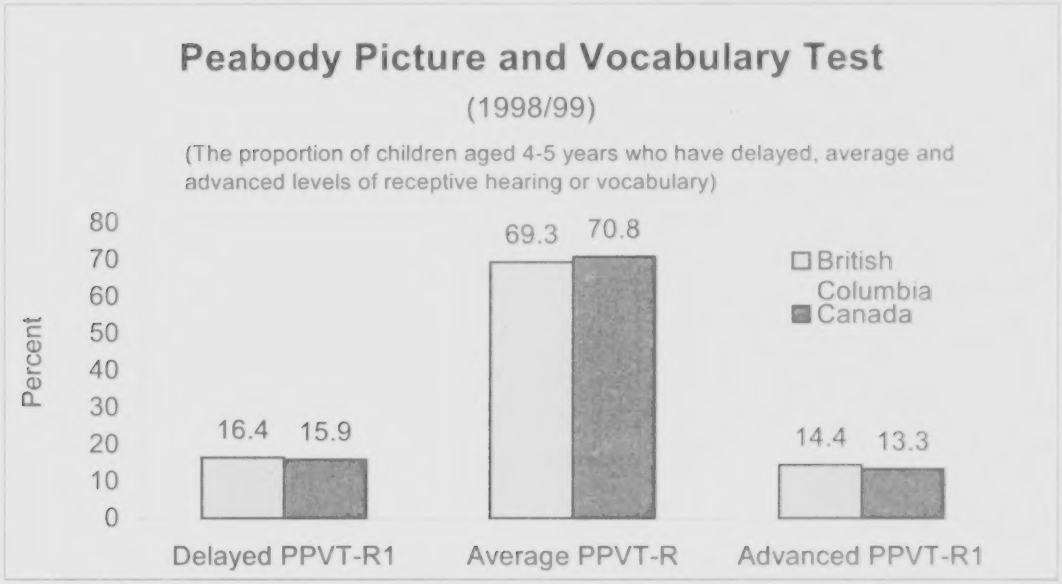
C. Language Skills

Analysis:

- In 1998/99, the proportion of BC children rated as Advanced on the Peabody Picture and Vocabulary Test (PPVT-R Test) (14.4%) was comparable to the national average of 13.3%.
- Generally the rate for BC children scoring Average on the PPVT-R Test (69.3%), is comparable to the national average of 70.8%
- The rate for BC children scoring as Delayed on the PPVT-R Test (16.4%) was also comparable to the national average of 15.9%.

Rationale:

- Verbal skills are one of many measures of "school readiness". If children are equipped with the skills to learn such as verbal ability, learning in the school environment can build on and enhance these skills and prepare them to succeed in education and work.



Definition of Measure:

Standard Score for PPVT-R (Peabody Picture and Vocabulary Test – Revised) reflects the proportion of children aged 4-5 years who have delayed, average and advanced levels of receptive hearing or vocabulary.

Caveats:

Children aged 0-3 years, children aged 4-5 years for whom the Person Most Knowledgeable did not provide consent for the PPVT-R to be administered, children living in the Territories, children living on reserve and children living in institutions are not included.

Source:

National Longitudinal Survey of Children and Youth, Master File (Statistics Canada) Cycle 3 (1998/99), Direct Assessment.

4. Family Related Indicators

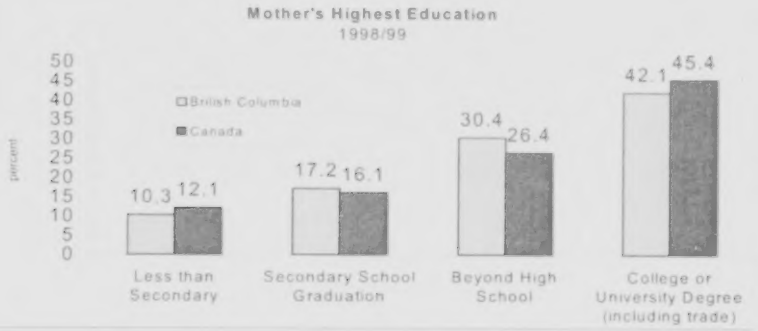
A. Parental Education

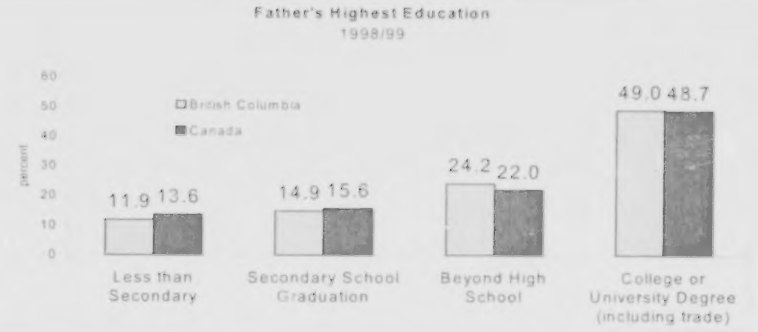
Analysis:

- In 1998/99, a greater number of BC mothers advanced beyond high school when compared on a national level. However, fewer of these BC mothers earned a college or university degree or trade designation.
- The educational attainment of BC fathers is marginally higher than the national average.

Rationale:

- Parental educational attainment is associated with the healthy development of children.





Definition of Measure(s):

(i) Mother's Highest Level of Education is the highest level of education attained by the mother of children aged 0-5 years.

(ii) Father's Highest Level of Education is the highest level of education attained by the father of children aged 0-5 years.

Caveats:

Parents whose Person Most Knowledgeable (or spouse of the Person Most Knowledgeable) is not a biological, step, adoptive or foster mother or father, children living in Territories, children living on reserve and children living in institutions are not included.

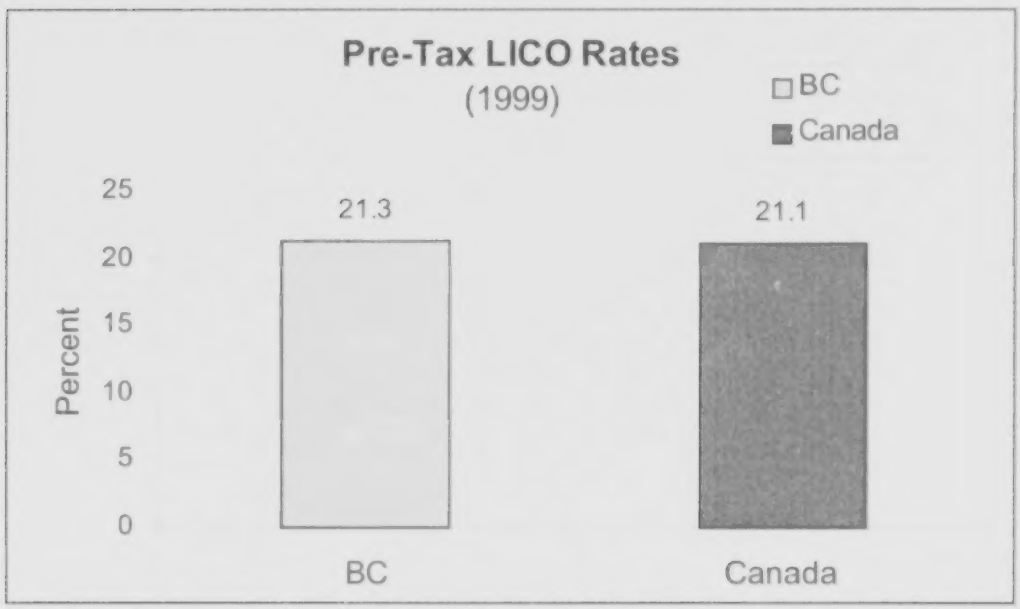
Source:

National Longitudinal Survey of Children and Youth, Master File (Statistics Canada), Cycle 3 (1998/99), Parent Questionnaire.

B. Level of Income

i) Pre-Tax Low-Income Cut-Off

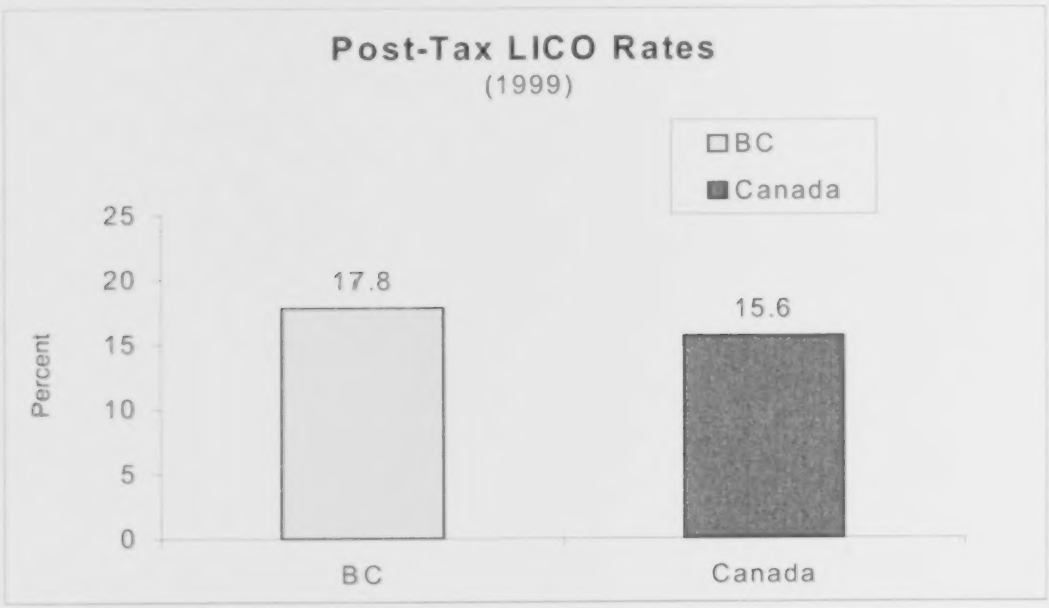
Analysis:
• In 1999 BC pre-tax low-income cut-off (LICO) rate was 21.3%, which was marginally higher than the national average of 21.1%.
Rationale:
• Low income is a factor associated with health and social problems in children. Low-income families face challenges in securing adequate and safe shelter, nutritional food, adequate clothing, and other necessary supplies.



Definition of Measure:
Pre-Tax Low-Income Cut-Off (LICO) Rate is the proportion of children aged 0-5 years living below the pre-tax LICO.
Caveats:
Children living in Territories are excluded.
Source:
Survey of Labour and Income Dynamics (SLID) – Statistics Canada, Reference Years 1998 and 1999.

ii) Post-Tax Low-Income Cut-Off

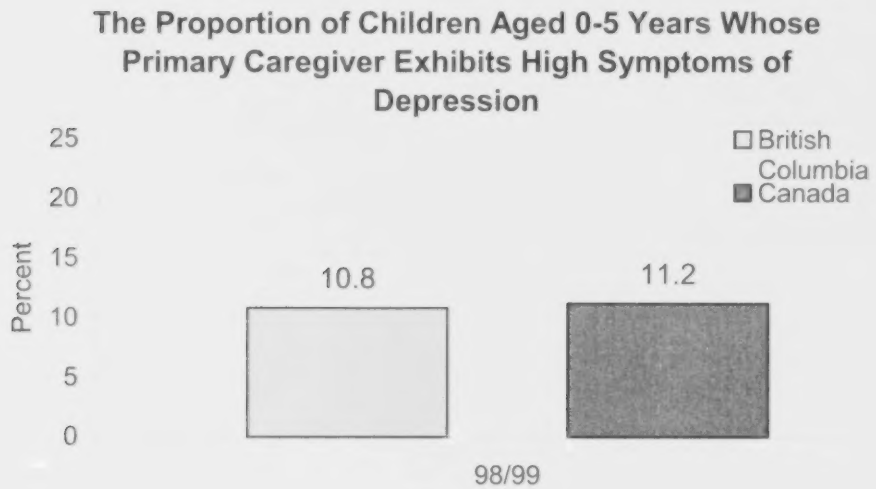
Analysis:
• In 1999 BC after tax low-income cut-off (LICO) was 17.8%, higher than the national average of 15.6%.
Rationale:
• Low income is a factor associated with health and social problems in children. Low-income families face challenges in securing adequate and safe shelter, nutritional food, adequate clothing, and other necessary supplies. This measure recognizes the change in purchasing power after tax for low to middle-low income levels.



Definition of Measure:
Post-Tax Low-Income Cut-Off (LICO) Rate is the proportion of children aged 0-5 years living below the post-tax LICO.
Caveats:
Children living in Territories are excluded.
Source:
Survey of Labour and Income Dynamics (SLID) – Statistics Canada, Reference Years 1998 and 1999.

C. Parental Health – Parental Depression

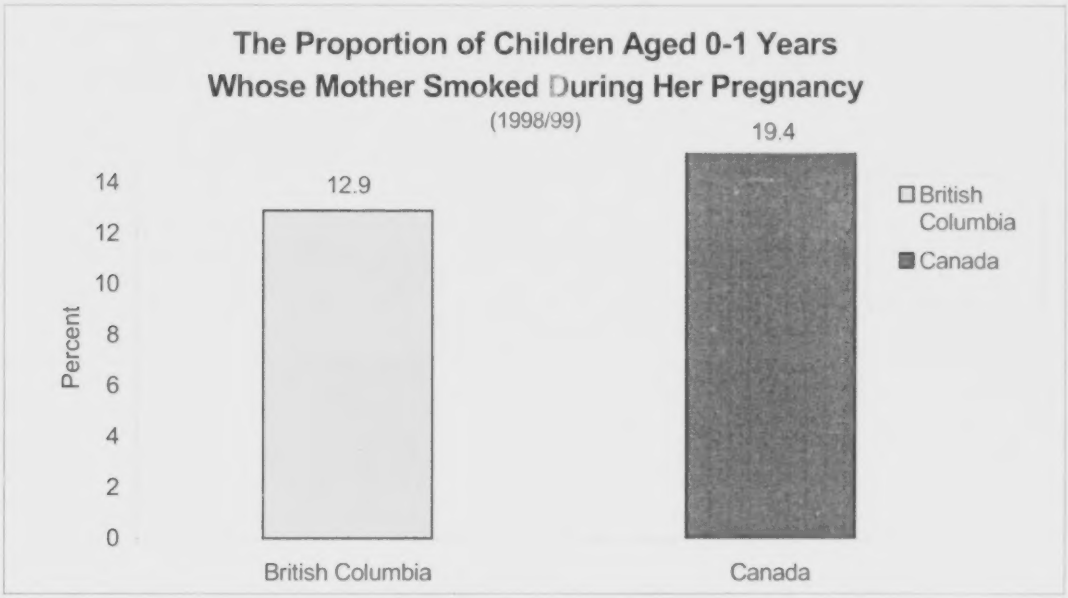
Analysis:
• In 1998/99 the percentage of BC children whose primary caregiver indicated symptoms of depression was 10.8%. This was marginally lower than 11.2% for the national average.
Rationale:
• How the primary caregiver feels is an important indicator of the child's health and well being. Optimal health and well being for a child are impossible to achieve if the primary caregiver is depressed, and therefore cannot give the best care to the child.



Definition of Measure:
The proportion of children aged 0-5 years whose Primary Caregiver exhibits high symptoms of depression.
Caveats:
Children living in Territories, children living on reserve and children living in institutions are excluded.
Source:
National Longitudinal Survey of Children and Youth, Master File (Statistics Canada), Cycle 3 (1998/99), Parent Questionnaire.

D. Parental Health – Tobacco Use During Pregnancy

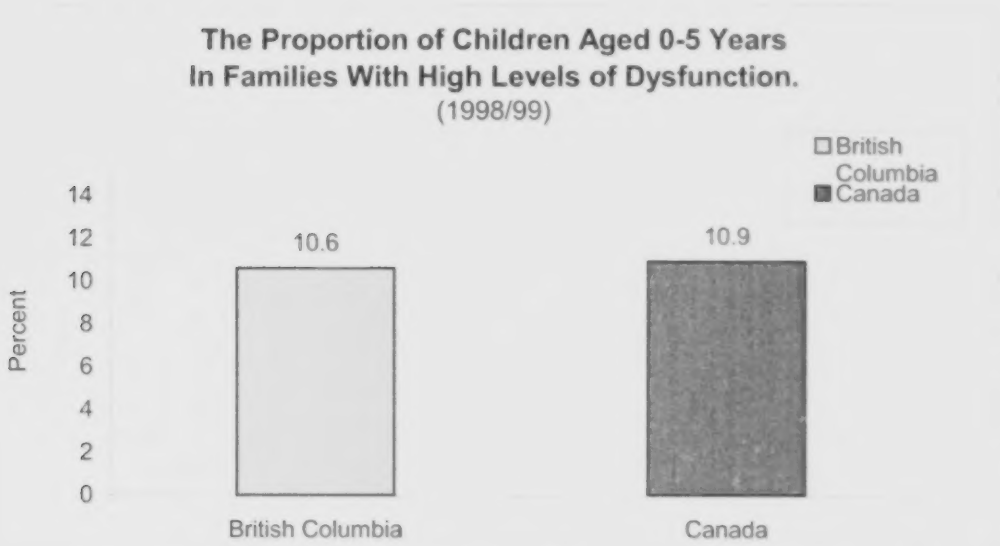
Analysis:
• In 1998/99, 12.9% of BC children's mothers smoked while pregnant, which was substantially lower than the national average (19.4%) for children.
Rationale:
• Mothers' use of tobacco and alcohol have been associated with risks to infant health. It has been determined that smoking during pregnancy leads to higher rates of low birth weight, stillbirth, prematurity, SIDS and breathing problems at birth.



Definition of Measure:
The proportion of children aged 0-1 years whose mother smoked during her pregnancy with the child.
Caveats:
Children aged 2-5 years, children living in Territories, children living on reserve and children living in institutions are excluded.
Source:
National Longitudinal Survey of Children and Youth, Master File (Statistics Canada), Cycle 3 (1998/99), Parent Questionnaire.

E. Family Functioning

Analysis:
• In 1998/99, the proportion of children living with high levels of family dysfunction was 10.6%. This was marginally lower than the national average (10.9%).
Rationale:
• The quality of the family environment will have major effects on the health and well being of children. Research from Ontario indicates that children from families, which are classified as dysfunctional, have greater relationship problems than those from healthy families.

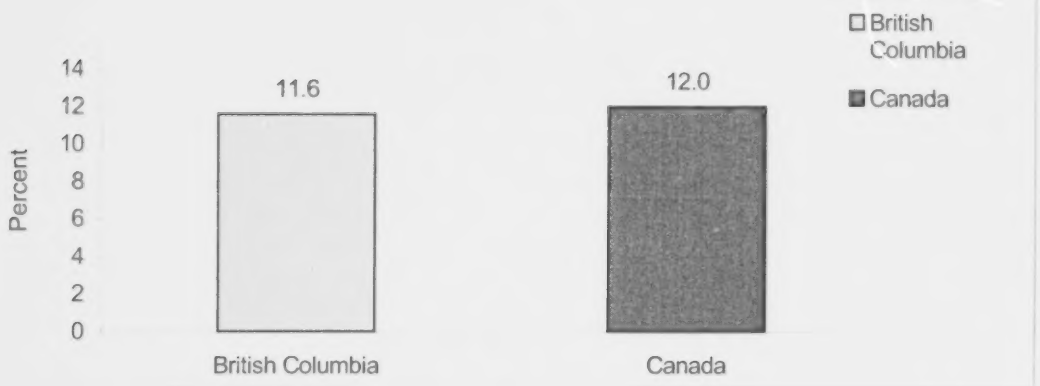


Definition of Measure:
The proportion of children aged 0-5 years in families with high levels of dysfunction.
Caveats:
Children living in Territories, children living on reserve and children living in institutions are excluded.
Source:
National Longitudinal Survey of Children and Youth, Master File (Statistics Canada), Cycle 3 (1998/99), Parent Questionnaire.

F. Positive Parenting

Analysis:
• In 1998/99, 11.6% of BC children experienced low positive interaction from their parents, comparable to the national average of 12.0% of children.
Rationale:
• Parental factors and the quality of interaction between parents and children have been found to contribute significantly to both positive and negative outcomes for children. The positive things parents do have a major influence on their development. Parenting problems, on the other hand, have been recognized as critical to the development of childhood disorders, especially conduct disorders.

The Proportion of Children Aged 0-5 Years Whose Parents Exhibit Low Positive Interaction With The Child
(1998/99)



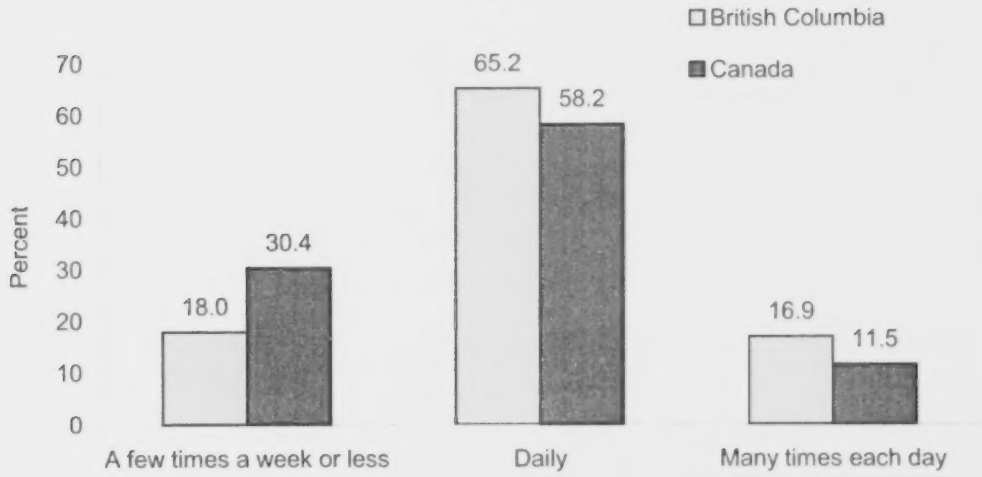
Definition of Measure:
Positive Interaction is the proportion of children aged 0-5 years whose parents did not exhibit low positive interaction with the child.
Caveats:
Children living in Territories, children living on reserve and children living in institutions are excluded.
Source:
National Longitudinal Survey of Children and Youth, Master File (Statistics Canada), Cycle 3 (1998/99), Parent Questionnaire.

G. Reading By Adult

Analysis:
• Generally in 1998/99, BC children are read to more often than the Canadian average. • In BC, 16.9% of children are read to "many times each day", which is more than the national average of 11.5%.
Rationale:
• Reading to children is a positive influence on children's development of literacy skills and in preparation to enter school. Children who are read to several times a day have score better on receptive vocabulary tests (PPCT-R) than those read to less often.

Distribution of Children Aged 2-5 Years By How Often An Adult Reads To The Child Or Listens To The Child Read

(1998/99)



Definition of Measure:
Distribution of children aged 2-5 years by how often an adult reads to the child or listens to the child read.
Caveats:
Children aged 0-1 years, children living in Territories, children living on reserve and children living in institutions are excluded.
Source:
National Longitudinal Survey of Children and Youth, Master File (Statistics Canada), Cycle 3 (1998/99), Parent Questionnaire.

5. *Community-Related Indicators*

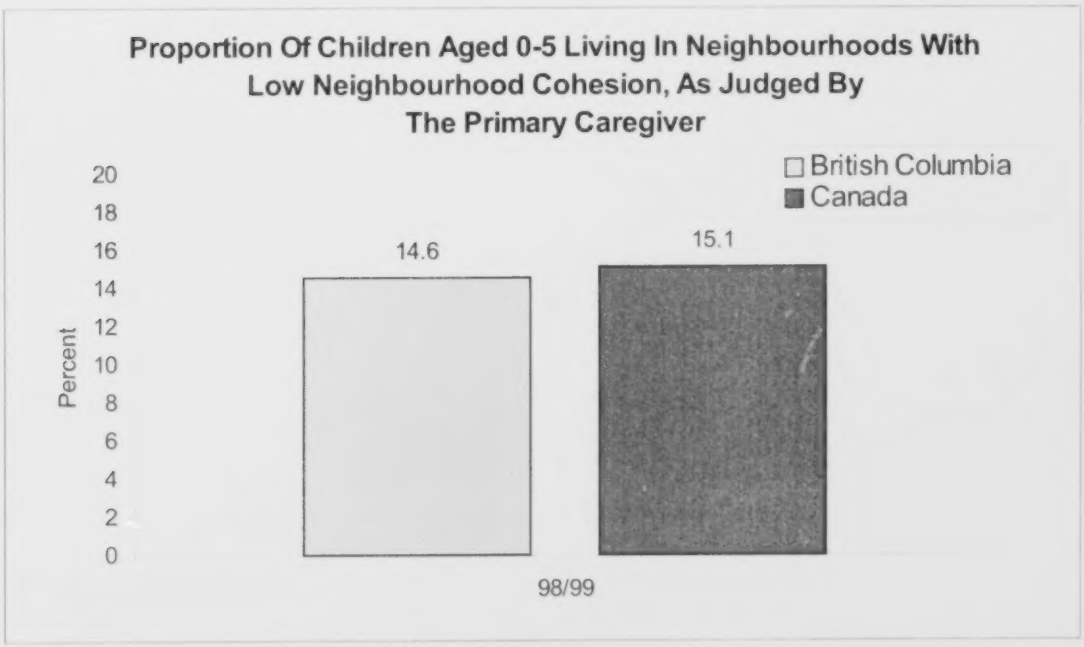
A. Neighbourhood Satisfaction, Safety and Cohesion

Analysis:

- In 1998/99, the proportion of BC children who were living in neighborhoods with low cohesion was 14.6%. This is marginally lower than the national average of 15.1% of children.

Rationale:

- While it is important to know how children are doing, it is equally important to understand why the outcomes occur. Therefore, indicators around the family and community focussing on services and environments as well as social cohesion are important.



Definition of Measure:

Neighbourhood cohesion is the proportion of children aged 0-5 living in neighbourhoods with low neighbourhood cohesion, as judged by the Primary Caregiver.

Caveats:

Children living in Territories, children living on reserve and children living in institutions are excluded.

Source:

National Longitudinal Survey of Children and Youth, Master File (Statistics Canada), Cycle 3 (1998/99), Parent Questionnaire.

Appendix A

SOURCES FOR STATISTICAL INFORMATION RELATED TO CHILD HEALTH AND WELL-BEING

British Columbia Vital Statistic Agency
http://www.vs.gov.bc.ca

"Measuring Success: A report on child and family outcomes in BC"
Ministry of Children and Family Development, May 2002
http://www.mcf.gov.bc.ca/publications/measure_success/msindex_2002.htm

National Longitudinal Survey on Children and Youth
www.hrdc-drhc.gc.ca/sp-ps/arb-dgra/nlscy-elnej/home.shtml

Summary report: "A Report on the health of British Columbians: Provincial Health Officer's annual report 1997, Feature report: The Health and Well-being of BC's Children"
http://www.hlth.gov.bc.ca/pho/

"The Health and Well-being of Aboriginal Children and Youth in British Columbia" (June 2002)
http://www.mcf.gov.bc.ca/aboriginal/ab_report_june2001.pdf